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Young Children Are More Likely to Spontaneously Attribute Mental States to Members of Their Own Group. — Source link

Niamh McLoughlin, Harriet Over

Institutions: University of York

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Niamh McLoughlin and Harriet Over

University of York

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Address for correspondence

Niamh McLoughlin

Department of Psychology

University of York

Heslington

York

YO10 5DD

Email: ncm513@york.ac.uk.

Abstract

We investigated if young children are more likely to spontaneously attribute mental states to members of their own social group. We asked 5- and 6-year-old children to describe the actions of interacting geometric shapes and manipulated whether children believed these shapes represented their own group or another group. Both 5- and 6-year-old children spontaneously used mental state words more often when describing members of their own group. Furthermore, 6-year-olds produced a greater diversity of mental state terms when talking about their own social group. These effects held across two different social categories (based on gender and geographical location). This research has important implications for our understanding of a broad range of social phenomena including dehumanization, intergroup bias and theory of mind.

Young children are more likely to spontaneously attribute mental states to members of their own group

The ability to understand others' minds is vital to human social interaction (Baron-Cohen, Leslie, & Frith, 1985; Gray, Gray, & Wegner, 2007). From infancy, we are able to reason about the intentions (Carpenter, Akhtar, & Tomasello, 1998), desires (Repacholi & Gopnik, 1997), and perhaps even the beliefs (Onishi & Baillargeon, 2005) of other people.

However, social psychological research has demonstrated that we do not always take the mental life of others into account (Harris & Fiske, 2006). We sometimes 'dehumanize', or deny mental capacities such as intelligence, agency and emotional depth to members of social outgroups (Haslam, 2006; Leyens et al., 2000). Outgroup dehumanization has been an integral part of prejudice and discrimination throughout history and remains an important political issue today (Haslam, 2006). Although the tendency to dehumanize others is not limited to any one political group, rising support for far right parties throughout the West makes the significance of this topic all too clear (Roth, 2017).

Here we combine developmental work on theory of mind with social psychological research on dehumanization by investigating if young children are more likely to spontaneously consider the mental states of ingroup members than those of outgroup members. In order to do this, we adapted a paradigm created by Abell, Happé, and Frith (2000) in which participants are asked to describe the behaviour of interacting geometric shapes. The actions of these shapes have been shown to elicit mental state terms in typically developing children and adults (Abell et al., 2000). We manipulated whether children believed these shapes represented members of their own social group or a different social group. We predicted that children would use mental state terms more often, and with greater variety, when describing interactions of their own group.

We tested these hypotheses with two different types of social group - focusing on divisions related to gender and geography. We chose to manipulate gender because previous research has shown that this is a particularly salient category to young children and that knowledge of gender stereotypes influences their aspirations and career goals (Bian, Leslie, & Cimpian, 2017). We also decided to manipulate geographical or national origin because this social division is so deeply intertwined with current political debates regarding immigration. We reasoned that, if the tendency to attribute more mental states to members of the ingroup is robust, then the effect should hold across both of these types of group.

We opted to work with 5- and 6-year-olds because, by this age, children are proficient at mental state reasoning (Baron-Cohen et al., 1985), frequently incorporate mental state terms into their conversation (Frith & Frith, 2003) and show preferences for members of their own gender and geographically based group (McLoughlin, Tipper, & Over, 2017).

Method

Participants

The sample consisted of 64 5-year-old (mean age: 5 years 6 months; age range: 4 years 11 months-5 years 11 months) and 64 6-year-old children (mean age: 6 years 5 months; age range: 6 years 0 months-6 years 11 months) with an equal number of boys and girls in each age group. Children were recruited from local primary schools situated in a small town in Northern England and from a science museum located in an urban centre. Further demographic information was not collected.

Six additional children were tested but excluded from analyses due to developmental delay (n = 1), technical error (n = 3), shyness (i.e., the child did not respond to any of the test questions or prompts, see below; n = 1) and for misunderstanding the instructions (n = 1).

The sample size was based on previous research exploring the development of intergroup cognition (e.g., Dunham, Baron, & Carey, 2011; Martin, Bennett, & Murray, 2008; McLoughlin et al., 2017). We decided on the sample size for each comparison in advance and data collection was stopped once the pre-specified sample size was reached.

Stimuli and Materials

Animations. The videos were originally developed by Abell and colleagues (Abell et al., 2000) and later used by other labs (e.g., Salter, Seigal, Claxton, Lawrence, & Skuse, 2008) to examine mental state attribution. The key feature of these videos from our perspective is that they can either be described in terms of simple actions (e.g., poking each other) or in terms of perceived mental states (e.g., teasing each other).

The videos depict a big and a smaller animated triangle that appear to interact. In the video used for the warm-up trial, one shape follows the other shape around the screen in a way that could be described as trying to imitate or mock that character. The main purpose of this warm-up trial was to familiarise the children with the stimuli. In the two videos used in the test phase, one shape appears to coax the other shape outside and, in the other video, one shape appears to deliberately surprise the other shape. A fourth video created by Abell et al. (2000) was discarded as the content was not ideally suited for young children (i.e., one shape attempts to seduce the other shape).

Each video is approximately 40 seconds in length. To avoid any assumptions based on gender or national stereotypical colour associations, the original colours of the animated shapes (red and blue) were changed to black using Movavi Video Editor software. The videos were presented to participants on a Lenovo ThinkPad Intel Core i5 laptop.

Scale. A 4-point Likert scale was used to measure children's explicit preference for the social groups (McLoughlin et al., 2017). This scale took the form of a bar chart with a "Not at all" option followed by black bars that increased in height to represent "A little", "A medium amount" and "A lot".

Design and Counterbalancing

The study had a 2 (type of group: gender, geographical location) × 2 (group membership: ingroup, outgroup) × 2 (age: 5-year-old, 6-year-old) mixed design. Children's age and the type of group were treated as between subjects variables and group membership was treated as a within subjects variable. The dependent variables were the total number and the diversity of mental state terms that children used in their description of the videos.

The video associated with the two groups was counterbalanced where half of children saw the 'coaxing' video paired with their own group and half of children saw the 'coaxing' video paired with their outgroup. The order in which the two videos ('coaxing' and 'surprising') were presented was also counterbalanced, as was the order in which children were presented with the two groups.

Procedure

Warm-up trial. Following a brief warm-up phase where the experimenter encouraged children to engage in a conversation with her, she introduced the warm-up video. This warm-up video was used to acclimatise children to the procedure. The experimenter introduced the video without making any references to gender or geographical location. She showed children a slide with two triangles and said, "The first video tells the story of two children, look here is one child (pointed to the big triangle) and here is another child (pointed to the smaller triangle)". She informed children that after the video, they could tell her what

they thought was happening. The experimenter then played the relevant video twice. Following this, a screenshot image of the two triangles from the video appeared on the screen and the experimenter proceeded to ask children four questions to elicit descriptions of what had happened. The experimenter first asked, "What do you think was happening in the video?" and once the child had responded, "What do you think the children were doing?" These questions were followed by two further probes where the experimenter asked, "Tell me about this child" and pointed first to the bigger character, then to the smaller character. If the child did not respond to a test question, the experimenter prompted them again. If the child did not respond to the prompt, then the experimenter moved onto the next question. If the child responded to the test questions with a response like "I don't know" or "I already told you", the experimenter moved onto the next question without using the prompt. Children were not given any specific feedback on their performance; the experimenter responded "Alright!" or "Okay!" to their statements regardless of what they said.

Gender groups. In the gender group condition, the experimenter introduced the test videos by saying "Now I am going to show you two more videos- one of them is going to be about two boys and the other one is going to be about two girls". The procedure for the test trials was identical to that of the warm-up trial with the exception that the experimenter specified the gender of the characters for the test questions (e.g., "What do you think the boys were doing?", "Tell me about this girl").

Geographically based groups. In this condition, the experimenter introduced the ingroup test video by saying that it concerned "two children who live in the same town as you. They go to a school just like your school and they talk just like you do". Children were told that the outgroup video, in comparison, involved "two children who live in a country a long way away from here. They go to a school quite different from your school and they talk in a different language to you". The test questions were identical to that of the warm-up trial

but that the geographical origin of the characters was specified (e.g., “What do you think the children from your town were doing?”, “Tell me about this child from the country far away”).

Explicit preference. Once the videos were over, the experimenter introduced children to the 4-point measurement scale and asked them to point to how much they liked people belonging to their own and the other social group. This was done to check that children preferred their own group (Dunham et al., 2011). At the end of the session, children were thanked for their participation and debriefed in a way as to ensure that they left the experiment in a positive frame of mind.

Coding

Coding scheme. We developed a coding scheme based on previous research investigating the mental state content of adult and children’s speech (Abell et al., 2000; Meins, Fernyhough, Arnott, Leekam, & de Rosnay, 2013; Nielsen & Dissanayake, 2000). Words were counted as referring to mental states if they referenced a character’s thoughts and desires (e.g., to want, to try, to like, to know, to decide, to look for), emotions (e.g., to be angry, scared, upset), intentions (e.g., to be naughty, cheeky) or current states (e.g., to be funny, shy). References to mental states involving interactions between the two characters were also coded in this category (e.g., pretending, tricking, arguing, surprising, spying). We coded the total number of mental state words children produced to describe each group and the diversity of mental state terms they used in each description. For example, a child who said a character was “trying to” do something twice produced two mental state terms in total but only one unique mental state term. Alternatively, when a child used two mental state words in conjunction with each other, for example, saying a character “wanted to scare” someone, they were coded as producing two mental state and two unique mental state terms.

Occasionally, in the gender group condition, children used an incorrect gender pronoun when referring to one of the characters, for example, referring to a character the experimenter had introduced as female as 'he'. Mental state words produced in combination with the incorrect pronoun were excluded from the analyses (n = 2).

Reliability. Children's responses for both test videos were transcribed and coded by the first author. A second rater, unaware of condition, recoded 100% of the data from the transcripts. Reliability between the two coders was very high for the number of mental state terms in the ingroup (ICC = .99, 95% CI [.99, .99]) and outgroup condition (ICC = .99, 95% CI [.99, .99]). Reliability was also very high for the diversity of mental state terms produced in both conditions (ICC = .99, 95% CI [.98, .99] and ICC = .98, 95% CI [.98, .99] respectively). The few disagreements between the coders were resolved by discussion.

Results

Preliminary Analyses

In our preliminary analyses, we inspected the data to see if there were any main effects of participant gender on the dependent variables. There were not (all p's > .145) and, as a result, we collapsed across this variable and do not consider it further.

Number of Mental State Words Produced

We conducted a three-way mixed ANOVA with group membership associated with the video (ingroup, outgroup) as a within-subjects factor and age (5-year-old, 6-year-old) and type of group (gender, geographical location) as between-subject factors. In line with our predictions, this result revealed a main effect of group membership: children used significantly more mental state words in the ingroup condition (M = 2.44, SD = 2.55) than in the outgroup condition, (M = 1.77, SD = 1.92), F (1, 124) = 8.50, p = .004, partial η2 = .06,

95% CI [.22, 1.13] (see Figure 1, panel A). There was also a main effect of age where 6-year-olds produced more mental state terms (M = 2.49, SD = 2.37) than 5-year-olds (M = 1.71, SD = 2.12), F (1, 124) = 5.96, p = .016, partial η^2 = .05, 95% CI [.15, 1.42], presumably because older children are generally more proficient in the use of mental state terms (Hughes & Dunn, 1998). There was no main effect of type of group (F (1, 124) = 1.49, p = .225), no interaction between group membership and age (F (1, 124) = .46, p > .250) and no interaction between type of group and group membership or age (all F's < 1.15, all p's > .250). There was also no three-way interaction between these variables (F (1, 124) = .02, p > .250). Thus, children produced a greater number of mental state terms when describing their ingroup than their outgroup and this effect held across both types of social group – gender and geographically based groups.

Having run these analyses, we wanted to check that this effect was not driven by a tendency for children to talk more about the ingroup overall. We therefore ran a further analysis testing how many words children spoke in total in each condition. Children did not produce significantly more words in the ingroup condition (M = 61) than the outgroup condition (M = 57; t (127) = 1.64, p = .104). Although this analysis did not reach statistical significance, we adopted a conservative approach and reran our original analyses using the proportion of children's speech that referenced mental states as the dependent variable. This analysis showed that children used proportionally more mental state words when talking about ingroup videos (M = .05, SD = .07) than when talking about outgroup videos (M = .03, SD = .03), F (1, 124) = 7.60, p = .007, partial η2 = .06, 95% CI [.00, .02]. There was no main effect of age (F (1, 124) = 2.72, p = .102) or type of group (F (1, 124) = .01, p > .250) and no interaction between type of group and the other critical variables (all F's < 1.09, all p's > .250) on the proportion of mental state words children produced. The group membership ×

age interaction also did not reach conventional levels of significance (F (1, 124) = 3.61, p = .060).

Diversity of Mental State Words Produced

We carried out a mixed ANOVA with the group membership of the video (ingroup, outgroup) as a within-subjects factor and age (5-year-old, 6-year-old) and type of group (gender, geographical location) as between-subject factors which yielded a main effect of group membership, F (1, 124) = 4.41, p = .038, partial η2 = .03, 95% CI [.01, .47]. Again, consistent with our predictions, children produced a greater diversity of mental state terms in the ingroup condition (M = 1.35, SD = 1.25) than in the outgroup condition, (M = 1.11, SD = 1.05). There was also a main effect of age where 6-year-olds used a more diverse range of mental state words (M = 1.48, SD = 1.20) than 5-year-olds (M = .98, SD = 1.06), F (1, 124) = 9.07, p = .003, partial η2 = .07, 95% CI [.17, .82], most probably because older children have a wider vocabulary (Hughes & Dunn, 1998). Interestingly, these main effects were qualified by a significant group membership × age interaction, F (1, 124) = 4.41, p = .038, partial η2 = .03. Follow-up tests showed that 6-year-olds used a greater diversity of mental state terms in the ingroup condition (M = 1.72, SD = 1.25) than the outgroup condition (M = 1.23, SD = 1.11), t (63) = 2.86, p = .006, d = .36, 95% CI [.15, .82] (see Figure 1, panel B), whereas 5-year-olds did not (t (63) = .00, p > .250). As in the previous analysis, there was no main effect of type of group (F (1, 124) = .83, p > .250), no interaction between type of group with either age or group membership (all F's < .37, all p's > .250), and no significant three-way interaction (F (1, 124) = 1.33, p > .250). These findings suggest that older children's bias to generate a greater diversity of mental state terms in the ingroup condition held across both gender and geographically based groups.

In order to control for any possible influence of the total number of words spoken by children in the two conditions, we also reran these analyses with proportional scores. In these analyses, there was also a significant main effect of group membership, F (1, 124) = 4.06, p = .046, partial η2 = .03, 95% CI [.00, .02], and a significant interaction between group membership and age F (1, 124) = 6.71, p = .011, partial η2 = .05. Again, follow-up tests showed that 6-year-olds produced a greater diversity of mental state words when describing ingroup interactions (M = .04, SD = .08) than when describing outgroup interactions (M = .02, SD = .02), t (63) = 2.49, p = .016, d = .31, 95% CI [.00, .04]. Five-year olds' responses did not significantly differ between conditions (t (31) = - .75, p > .250). In this analysis, there was no significant main effect of age (F (1, 124) = 2.69, p = .103) or type of group (F (1, 124) = .01, p > .250) and no other significant interactions (all F's < 2.17, all p's > .143).

Explicit Preference

Finally, we conducted a three-way mixed ANOVA with children's group membership (ingroup, outgroup) as a within-subjects factor and age (5-year-old, 6-year-old) and type of group (gender, geographical location) as between-subjects factors on explicit preference ratings. This analysis confirmed that children liked members from their own group (M = 2.63, SD = .72) significantly more than members of the other group (M = 1.76, SD = 1.01), F (1, 124) = 60.14, p < .001, partial η2 = .33, 95% CI [.65, 1.09]. There was no main effect of age on children's explicit preference (F (1, 124) = .90, p > .250) and no interaction between group membership and age (F (1, 124) = .01, p > .250). There was no main effect of type of group (F (1, 124) = 1.93, p = .168) and this variable did not interact with group membership and/or age (all F's < 2.15, all p's > .145). Hence, it seems that children felt similarly positive about both their own gender and geographically based group and their explicit preference did not vary by age.

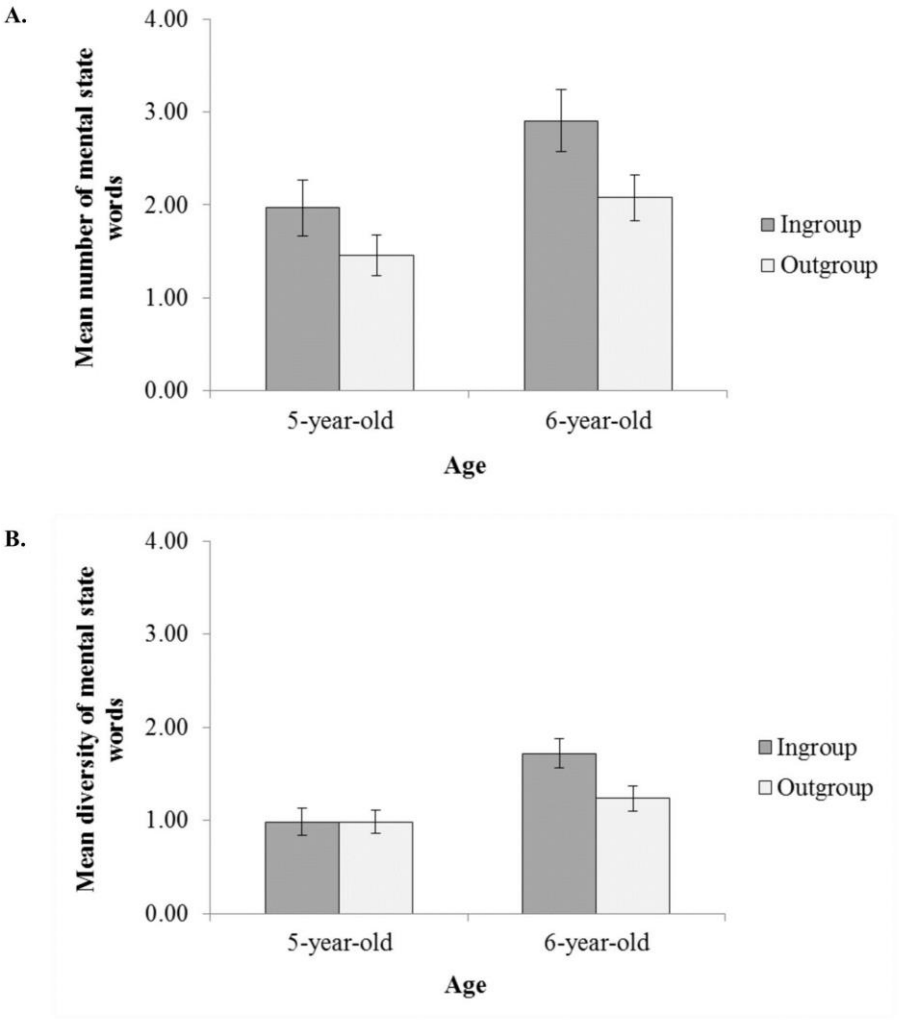

Figure 1. The results for the mean number of mental state words (panel A) and for the mean diversity of mental states words (panel B) that 5- and 6-year-old children produced in each condition. Error bars represent the standard error of the mean.

Discussion

Our results reveal that young children use mental state terms more often when describing members of their own social group. Furthermore, 6-year-old, but not 5-year-old, children use a greater diversity of mental state words when talking about their own group. This effect held across two different social categories – based on gender and nationality. Importantly, these results cannot be explained by an increased motivation to talk more about the ingroup in general, as they held even when we reran the analyses with the proportion of

mental state words children produced for each video. Overall, our findings demonstrate that young children are selective in the way they attribute mental states to others.

This study has important implications for our understanding of the origins of intergroup bias. Previous developmental research has tended to concentrate on children's relative preferences for members of their own groups (Dunham et al., 2011) and has established that children show both explicit and implicit (Baron & Banaji, 2006) preferences from early in development. Here, in contrast, we focus on mental state attribution. This topic is closely related to the concept of dehumanization (Harris & Fiske, 2006). Prior work with adults has found that individuals are less likely to attribute a mind to outgroup members (Hackel, Looser, & Van Bavel, 2014) which has significant consequences for moral judgements (Gray et al., 2007). Relevant research in philosophy and sociology has shown that dehumanization is pervasive within the media and other social domains (Esses, Medianu, & Lawson, 2013; Redeker, 2007) and could thus have wide-ranging repercussions for group relations. Research into the development of dehumanizing biases may therefore enhance our understanding of intergroup harm and prejudice more generally. However, until now, this subject has received relatively little attention. Recent studies have suggested that children perceive less humanness in outgroup faces (McLoughlin et al., 2017) and rate the emotions of outgroup members to be less intense (Martin et al., 2008). Our results inform work in this related field by showing that, at least from the age of five, children are less likely to spontaneously reference the mental states of those belonging to another group.

Our findings also have interesting implications for research on theory of mind. Since Wimmer and Perner's 1983 seminal paper, the study of mental state understanding has blossomed within developmental psychology. This work has primarily focused on when children first develop the ability to reason about the minds of others including their feelings (Hughes & Dunn, 1998) and beliefs (Onishi & Baillargeon, 2005). The current findings

underline the importance of considering the situations in which children are more or less motivated to deploy this skill, in addition to investigating when this ability emerges (Over, 2016).

A valuable question for future research is whether our results would extend beyond children in WEIRD (Western, Educated, Industrialised, Rich and Democratic) cultures (Henrich, Heine, & Norenzayan, 2010). Previous research has revealed that there are systematic differences in the emphasis that cultural groups place on mental states as explanations for other people's behaviour (Lillard, 1998). Cultural variations in both mental state attribution (Lillard, 1998) and intergroup dynamics (Fischer & Derham, 2016) could influence the relationship we observed in this study.

The present study addresses a surprising disconnect between literature examining the development of intergroup cognition and theory of mind (Rakoczy, 2014). The combination of these research areas is of potential interest to academics working in more applied settings. For example, future work could explore the social consequences of biased mental state attribution and if encouraging children to attribute a mental life to outgroup members may increase their readiness to engage in prosocial behaviour (Drummond, Paul, Waugh, Hammond, & Brownell, 2014) in Western contexts and beyond. In this way, investigation into the development of dehumanization may ultimately inform research-led interventions to foster more positive intergroup relations.

Author Contributions

Both authors contributed to the concept and design of the study. Testing and data collection were performed by N. McLoughlin. N. McLoughlin performed the data analysis under the supervision of H. Over. N. McLoughlin drafted the manuscript and H. Over provided critical revisions. Both authors approved the final version of the manuscript for submission.

Declarations of Conflicting Interests

The authors declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

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References

Abell, F., Happé, F., & Frith, U. (2000). Do triangles play tricks? Attribution of mental states to animated shapes in normal and abnormal development. *Cognitive Development, 15*(1), 1-16. doi: 10.1016/S0885-2014(00)00014-9

Baron-Cohen, S., Leslie, A. M., & Frith, U. (1985). Does the autistic child have a "theory of mind"? *Cognition, 21*(1), 37-46.

Baron, A. S., & Banaji, M. R. (2006). The development of implicit attitudes. Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science, 17*(1), 53-58. doi: 10.1111/j.1467-9280.2005.01664.x

Bian, L., Leslie, S.-J., & Cimpian, A. (2017). Gender stereotypes about intellectual ability emerge early and influence children's interests. *Science, 355*(6323), 389.

Carpenter, M., Akhtar, N., & Tomasello, M. (1998). Fourteen- through 18-month-old infants differentially imitate intentional and accidental actions. *Infant Behavior and Development, 21*(2), 315-330. doi: 10.1016/S0163-6383(98)90009-1

Drummond, J., Paul, E. F., Waugh, W. E., Hammond, S. I., & Brownell, C. A. (2014). Here, there and everywhere: emotion and mental state talk in different social contexts predicts empathic helping in toddlers. *Frontiers in Psychology, 5*, 361. doi: 10.3389/fpsyg.2014.00361

Dunham, Y., Baron, A. S., & Carey, S. (2011). Consequences of "minimal" group affiliations in children. *Child Development, 82*(3), 793-811. doi: 10.1111/j.1467-8624.2011.01577.x

Esses, V. M., Medianu, S., & Lawson, A. S. (2013). Uncertainty, threat, and the role of the media in promoting the dehumanization of immigrants and refugees. *Journal of Social Issues, 69*(3), 518-536. doi: 10.1111/josi.12027

Fischer, R., & Derham, C. (2016). Is in-group bias culture-dependent? A meta-analysis across 18 societies. *SpringerPlus, 5*, 70. doi: 10.1186/s40064-015-1663-6

Frith, U., & Frith, C. D. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the the Royal Society B: Biological Sciences, 358*(1431), 459-473. doi: 10.1098/rstb.2002.1218

Gray, H. M., Gray, K., & Wegner, D. M. (2007). Dimensions of mind perception. *Science, 315*(5812), 619. doi: 10.1126/science.1134475

Hackel, L. M., Looser, C. E., & Van Bavel, J. J. (2014). Group membership alters the threshold for mind perception: The role of social identity, collective identification, and intergroup threat. *Journal of Experimental Social Psychology, 52*, 15-23. doi: 10.1016/j.jesp.2013.12.001

Harris, L. T., & Fiske, S. T. (2006). Dehumanizing the lowest of the low: Neuroimaging responses to extreme out-groups. *Psychological Science, 17*(10), 847-853. doi: 10.1111/j.1467-9280.2006.01793.x

Haslam, N. (2006). Dehumanization: An integrative review. *Personality and Social Psychology Review, 10*(3), 252-264. doi: 10.1207/s15327957pspr1003_4

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Most people are not WEIRD. *Nature, 466*(7302), 29. doi: 10.1038/466029a

Hughes, C., & Dunn, J. (1998). Understanding mind and emotion: longitudinal associations with mental-state talk between young friends. *Developmental Psychology, 34*(5), 1026-1037.

Leyens, J. P., Paladino, P. M., Rodriguez-Torres, R., Vaes, J., Demoulin, S., Rodriguez-Perez, A., & Gaunt, R. (2000). The emotional side of prejudice: The attribution of secondary emotions to ingroups and outgroups. *Personality and Social Psychology Review, 4*(2), 186-197. doi: 10.1207/s15327957pspr0402_06

Lillard, A. (1998). Ethnopsychologies: cultural variations in theories of mind. *Psychological bulletin, 123*(1), 3.

Martin, J., Bennett, M., & Murray, W. S. (2008). A developmental study of the infrahumanization hypothesis. *British Journal of Developmental Psychology, 26*(2), 153-162. doi: 10.1348/026151007X216261

McLoughlin, N., Tipper, S. P., & Over, H. (2017). Young children perceive less humanness in outgroup faces. *Developmental Science*. doi: 10.1111/desc.12539

Meins, E., Fernyhough, C., Arnott, B., Leekam, S. R., & de Rosnay, M. (2013). Mind-mindedness and theory of mind: mediating roles of language and perspectival symbolic play. *Child Development, 84*(5), 1777-1790. doi: 10.1111/cdev.12061

Nielsen, M., & Dissanayake, C. (2000). An investigation of pretend play, mental state terms and false belief understanding: In search of a metarepresentational link. *British Journal of Developmental Psychology, 18*(4), 609-624. doi: 10.1348/026151000165887

Onishi, K. H., & Baillargeon, R. (2005). Do 15-month-old infants understand false beliefs? *Science, 308*(5719), 255-258. doi: 10.1126/science.1107621

Over, H. (2016). The origins of belonging: Social motivation in infants and young children. *Phil Trans R Soc B, 371*, 20150072. doi: 10.1098/rstb.2015.0072

Rakoczy, H. (2014). What are the relations of thinking about groups and theory of mind? *British Journal of Developmental Psychology, 32*(3), 255-256. doi: 10.1111/bjdp.12047

Redeker, R. (2007). *The new face of humanity*. Belgium: Academica Press.

Repacholi, B. M., & Gopnik, A. (1997). Early reasoning about desires: Evidence from 14- and 18-month-olds. *Developmental Psychology, 33*(1), 12-21.

Roth, K. (2017). The dangerous rise of populism: Global attacks on human rights values. *Human Rights Watch*. Retrieved from: https://www.hrw.org/world-report/2017/country-chapters/dangerous-rise-of-populism

Salter, G., Seigal, A., Claxton, M., Lawrence, K., & Skuse, D. (2008). Can autistic children read the mind of an animated triangle? *Autism, 12*(4), 349-371. doi: 10.1177/1362361308091654

Wimmer, H., & Perner, J. (1983). Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. *Cognition, 13*(1), 103-128. doi: 10.1016/0010-0277(83)90004-5